Neglected tropical diseases - epidemiological, socioeconomic, genomic and modelling approaches for control

Faculty:

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Project Description:

A range of research projects (MPH and PhD) are available to better understand and control neglected tropical diseases (NTDs) with a regional focus on Southeast Asia. Most of my research has aimed to unravel the complex epidemiology of parasitic diseases, such as schistosomiasis and foodborne trematodiasis, though topics on a range of different pathogens and populations are possible. My research group employs diverse methods, including mechanistic statistical modelling, population genomics, and field studies in Lao PDR.

Students with an interest in global health and using (or learning) statistical methods are encouraged to get in touch.

Examples of potential projects include:

- What is the burden of neglected tropical diseases in Southeast Asia? A geospatial analysis with the potential to use AI for literature mining.

- What drives reinfection with the carcinogenic liver fluke (Opisthorchis viverrini) in Thailand? A statistical project examining environmental and behavioural causal factors using a large dataset.

- How do helminths (parasitic worms), with complex lifecycles, evolve and what are the implications for disease control? A population genomics project.

- How do changes to rural poverty affect tropical disease endemicity in Southeast Asia? A geospatial analysis with the potential to use AI for literature mining.

- Evaluation of parasite elimination projects in Asia. A narrative, historical, approach to learn lessons from control programmes in Japan, South Korea, China and Singapore.